

eHealth Solutions in European Community Pharmacies: Annex





Annex of Examples

Austria

Mobile Pharmacy App – Health and Medicines Information

A free of charge mobile app¹ (Android & iOS), with more than 400.000 downloads to date has been designed to help patients in organising their medication. This self-updating app has been designed to be accessible to users with disabilities and was rated *top app in the field of mHealth*. The app includes a pharmacy locator, medication guide, medication organiser / diary, vaccine schedule / reminder and pharmacy news and information.



The pharmacy locator allows rapid identification of the nearest pharmacy and contact details, including a direct dialling function. The medication guide can be used to search for the brand name, generic name or a whole list of medicines. It also has a barcode scanning function for

¹ https://www.medetel.eu/download/2016/parallel sessions/presentation/day2/Mobile Pharmacy App.pdf



simple, accessible identification of a product. The medication guide also includes video clips and photos to provide patients with a better understanding of the use of their medicines and also identifies risks for specific types of patients, warnings, precautions and contraindications.

■ 3% ^H 1 83%	08:55		A1 🗢	09:39	- 7 10 100 % 🖿	
Chronik		<	Aspirin® +	-c - Brausetabl	etten (10 St.))
Impfpass Chronik Erinnerungen	(j) Empfehlung			ASPIRIN+C		
2015				Bei Selang, prippeles Initian, Schwarzer Leel Faller	8	
Pneumokokken (bakterielle Lungenentzündung)	>		2	3		
UT.01.2015, Prevenar inj.sus 13 0,5mi		Arznein Ihren Ap	nittel (Warnhinweis t potheker!)	bei speziellen Patienteng	ruppen. Fragen Sie	
2014		Aspi	irin® +c - E	Brausetablett	en (10 St.)	
Diphtherie, Tetanus (Wundstarrkrampf), Pertussis (Keuchhusten), Poliomyelitis (Kinderlähmung, kurz Polio) 06.12.2014, Boostrix Polio Ijsus 0,5ml	>	Herstell PZN: 00	ler. Bayer 104386			
Rotavirus (Brechdurchfall)	>	•	Zu meinen Me	dikamenten hinzufi	ügen	
01.09.2014, Notarix Sus Pappilk.1,5mi		Bei Erkä Schnell	ältung und Fieber. wieder fit fühlen.			
		Schmer Mit Vita grippale	zstillend, fiebersenk min C – hilft, den er en Infekten zu decke	end und entzündungsh höhten Bedarf an diesen n	emmend n Vitamin bei	
			Detaillierte P	roduktinformatio	n	>
		0	Hinweise und	d Warnungen		>
		-	Gebrauchsin	formation		>
		Für eine Apothel	e persönliche Beratu ke.	ng wenden Sie sich bitte	an Ihre nächste	

The medication organiser (with diary, alarm and reminder functions) allows patients to keep track of their medications and conditions and determines the compatibility between current and newly prescribed medication. This function also enables users to set reminders for multiple medications. The vaccine schedule / reminder function uses an electronic vaccination certificate to save the date of vaccination, provide reminders on routine vaccinations and brief 'catch-up' recommendations. This function contains all the basic tools needed for a point of care vaccine reference, for example, information on the recommended minimum age to receive a particular vaccination.



Belgium

The Dossier Pharmaceutique Partagé – A Shared Medication Record

Belgian pharmacists maintain a confidential medication record for their patients. The "Dossier Pharmaceutique Partagé" or "DPP"² contains details on dispensed medication (from a prescription or sold over-the-counter) and is used to prevent medication and disease-related problems such as detecting interactions, medication abuse, duplication of therapy and of course to monitor adherence. This service is led by the Belgian professional associations for pharmacists in order to facilitate improved patient safety and provision of pharmaceutical care.

GIE	ANTHEUN	IS MA	RC I	LUC	VANCRAEVVELDT FREDER				Verlaat alle	verindieni
NT	HEUNIS M	ARC	LU	C	•)			Gener.	-	
10/	460 526				1	VZI Aktief		(and a set	Patient	Wer analy
/etpi	akkingen	0			Totaal Patient	0,00	Momo	Delphi	selectie	Putient
2	Historiek					14	Filter			
ŝ		Тур	=	Stat	Omachripping	Begin	Losts 🔍 🔺		Product	Arts
Ē	Via	GFD	1		ASPIRINE 100 MG COMP 30	02/14	02/14		selectie	antecti
2		GFD	1		ASPIRINE 100 MG COMP 30	02/14	02/14			
٦		GFD	1		NURDEEN 30 TABL 200 MG	02/14	82/14		(and)	
	OTC	GFD	1		NUROFEN 30 TABL 200 MG	02/14	02/14		Terug	VRS
	ore	P	19		ASPIRINE 100 MG COMP 30	03/10	02/14		Detains	
		P	57	22	CLAMOX1L CAPS 16 X 500 MG	12/10	02/14		-	
	-	GFD	1		NOVABRITINE CAPS 16:X 500MG	02/14	02/14	a	Win Lin	We
	Mag	GFD	1		CLAMORYL CAPS 16 X 500 MG	02/14	02/14			
1		GFD	1		NUROFEN 30 TABL 200 MG	02/14	02/14			
		P.	4		DAFALGAN FORTE DROOG 16 TABL 50	02/14	02/14		di Divern	Ver unde Austal
	Div	GFD	1		NUROFEN 30 TABL 200 MG	01/14	01/14	0		
		GFD	1		CLAMORYL CAPS 16 × 580 MG	01/14	01/14			
		GFD	1		CLAMONYL CAPS 16 X 500 MG	01/14	01/14			
		P	3		ALTERNA POST-OP LEDIGB. N/STER 10-70MM 6 12800	01/14	01/14	12	Hand Vrk	Detail
		P	4		ALTERNA FREE G/Z TRANSP MAID 20-75MM 30 46326	01/14	01/14			attraction
	Vitalink	P	3		COMBIPLAST SUPERFLEX PL BG 35/57MM 5 FF3557	01/14	61/14			_
	and a state of	GFD	1		CLAMOXYL CAPS 16 X 500 MG	01/14	01/14		1000	Zoek
		P.	16	20	RILATINE COMP 20X 10 MG	01/13	01/14 💌		Magintraal	affeveri
1	Details							100		
1	Farmace	utisc	he	zord			Filter		and the second	-
-		0			(Second)			0.00	Subtotaal	Tota

These records are capable of being shared (subject to patient consent and privacy protocols) with all participating Belgian pharmacists. This increases patient safety when dispensing medication and making available relevant, accurate and high-quality information on a patient's medication history. The system is fully integrated to existing pharmacy dispensing software.

2

https://www.medetel.eu/download/2016/parallel_sessions/presentation/day2/A_shared_pharmaceutical_record_ in a_Belgian.pdf



In order to access this record, the pharmacist must be working in a community pharmacy (e-ID checked by authorities), must have a "therapeutic relationship" with the patient and must obtain the patient's informed consent (opt-in system managed by authorities). To date more than threequarters of pharmacists in Belgium have subscribed to the service and use it for more than six and a half million patients (more than 60% of the Belgian population).

pharmacie.be / apotheek.be – Mobile app to Locate On-call Pharmacists

A mobile app is available to patients in Belgium which shows the location and availability of the pharmacists who are "on-call" at any given time. This feature allows patients to quickly and easily locate the nearest pharmacy that can provide 24 hour services during the evenings / nights, weekends and public holidays.





Bulgaria

Mobile Pharmacy App - Open access e-platform "Mapteka.bg"³

The Bulgarian Pharmaceutical Union (BPhU) launched a unique online platform in April 2016.



The platform provides:

- Free access to information concerning pharmacists and pharmacies;
- Summarised information from several institutional registers Ministry of Health (register of issued licences of medicinal products containing narcotic substances), Bulgarian Drug Agency (register of pharmacies with relevant information on issued certificates for registration of pharmacy), Regional Health Inspections (register of drugstores), National Health Insurance Fund (register of pharmacies working with the Fund) and BPhU e-register of pharmacists;
- Relevant information to patients, healthcare professionals, government institutions and business;
- Information on access to medicines and pharmacy services throughout the country;
- A pharmacy search function including by region, municipality, address, phone number, services and pharmacy working hours;
- A route planner for the most direct route to the pharmacy;
- Statistical information on access to pharmaceutical services and areas without a pharmacy;
- An overview of pharmacy density and information on equal access to pharmacy services in Bulgaria.

³ <u>http://mapteka.bg/</u>



Czech Republic

Mobile Pharmacy App – ékárnu⁴

Patients and the general population in the Czech Republic can search directly from the Czech Chamber of Pharmacists' pharmacy database on their iPhone or Android devices. Not only can it be used to locate and calculate the distance to the nearest pharmacy, but also those participating in public health campaigns organised the Chamber such as the European Antibiotic Awareness Day, the "Day for Pharmacies" and campaigns on the safe and rational use of medicines.

The app can also be used to locate pharmacies providing additional activities organised and guaranteed by the Chamber such as smoking cessation, diabetes screening, caring for Alzheimer patients, consultations on patient medication records and weight reduction.



⁴ <u>http://www.lekarnici.cz/Pro-verejnost/Informace-pro-verejnost/Lekarny-v-mobilu.aspx</u>



Denmark

Online Prescription Overview and Purchase

Danish citizens can access their prescriptions online via apoteket.dk – the homepage representing all Danish Pharmacies. Apoteket.dk is optimised for use on desktop, tablet and smartphone platforms.



How does it work?

- Users log on with the secure login "NemID" for Danish citizens
- Users create a profile
- Users then receive an overview of their prescriptions
- Users can also access prescriptions for their children
- If users choose to, they can purchase the medicine online from their preferred pharmacy

Chat and Video Consultation

Users of Apoteket.dk can chat online or have a video consultation with a pharmacist. The chat function is available on desktop, tablet and smartphone platforms. A secure telephone service remains in operation for those who prefer to call to speak to a pharmacist.

Services are open 24/7 – so whenever one has a question about medicines and health – the pharmacy is only a click or a call away.





How does it work?

- Users visiting Apoteket.dk for an answer on a health issue are likely to see the ad for the chat function
- Users purchasing medicines receive a popup message inviting them to receive counseling about the medicine users can accept or refuse
- A single click on the chat button puts the user in line for a chat consultation
- The pharmacy attending the chat gets notified about new online customers by a screen popup, a screen sound and a text on a cell phone and the pharmacist answers



Medical Reminder App for iOS and Android

To help patients to take their medications, the Association of Danish Pharmacies developed an app to send them reminders when it is time for a dose of their medicine. The app has similarities to the calendars of mobile devices.

When the app is downloaded onto their device, the users create a profile. The app and the applied data is securely saved on the device and not accessible remotely e.g. via the iCloud or internet services.



How does it work?

- Users can add medicines to their medicine list
- Users can choose amongst the most common intake interval daily/weekly/user defined interval. There is also a specific function for oral contraceptives
- Users can add instructions e.g. "on an empty stomach"
- When all information needed is filled in the app will send the user push messages with reminders on the recommended time
- Users can accept, refuse or postpone the reminder when it pops up.

Other health functions

- Users can add measurements for blood glucose, blood pressure, weight and other notes to the calendar
- Users can send the notes from the calendar app to their e-mail.

France

The Dossier Pharmaceutique – A Shared Medication Record

In France patients have a "Dossier Pharmaceutique"⁵ maintained by community pharmacists following the establishment of the legal framework in 2007, which delegates responsibility for the service to the French National Chamber of Pharmacists. This service displays all treatments, (prescribed or over-the-counter), dispensed to a patient during the previous four months, regardless of the pharmacy in which they were delivered. To date, almost all French pharmacists have implemented this service accounting for more than 330 million instances of sharing patient data, including over 100 'alarm bells' and medication recalls.



Community pharmacists have read and write access to the Dossier Pharmaceutique and will shortly be joined by all hospital physicians who will receive read-access following a successful pilot. Half of the population in France have a Dossier Pharmaceutique with 80.000 new Dossiers being created each week. The linkage between secondary and primary care of this

⁵ <u>https://www.medetel.eu/download/2016/parallel_sessions/presentation/day2/Olivier_Por_Overview.pdf</u>



service has facilitated clinical interventions by pharmacists and avoided medication related problems. Two studies⁶ found that the Dossier Pharmaceutique helped pharmacists detect medication interactions and contraindications, often in cases of commonly-used, non-prescription medicines.

Observia Text Messaging Service - Health and Medicines Information

"Observia"⁷ is a free text message service which patients can subscribe to when advised by a health professional. "Observia" sends texts messages with health and nutrition advice related to the particular disease area relevant to the patient (e.g. hypertension, diabetes, respiratory disease). The service also provides alerts to improve medication adherence, reminders for appointments, vaccinations, repeat prescriptions, invitations to engage with relevant patient groups. "Observia" also provides safety alerts sent by the pharmacist (e.g. pollution and pollen indices, medication recalls) and patients can choose to manage their account by either mobile phone or internet⁸.

DO-Pill – Adherence Service

"DO-Pill" is a smart electronic pill-box that "brings the expertise of the pharmacist back home". When the pharmacist receives a prescription, they register its content on the pharmacy computer, which is connected to the pill-box via the internet. The computer updates the data whilst the pharmacist fills the compartments of the pill-box. When the patient needs to take their treatment, an alarm sounds and the relevant compartment of the pill-box lights up. Another alarm also sounds if the patient opens the wrong compartment. The pharmacist is informed when the patient opens a compartment, whether is it in line with the prescribed regimen or not. The pill box is available on prescription and "DO-Pill" is currently used in three French projects as a support tool for improving adherence (patients who have recently had a kidney transplant, epilepsy and children and teenagers suffering from leukaemia⁹).

⁶ <u>http://www.ordre.pharmacien.fr/Communications/Communiques-de-presse/Evaluation-du-DP-de-sa-mise-en-oeuvreaux-Interventions-Pharmaceutiques</u>

https://www.medetel.eu/download/2015/parallel_sessions/presentation/day3/Observia_Pharmacy_Interviews.pd f

⁸ <u>http://www.observia.fr/Professionnels-de-sante</u>

⁹ <u>http://www.pharmagest.com/</u>



Telemedinov – Teleconsultation in Community Pharmacies

In France, telemedicine projects are supported by Regional Health Agencies. An example of good practice is the "Telemedinov"¹⁰ project in the Nantes region (Pays de la Loire), where a teleconsultation service hosted in community pharmacies aims at monitoring both acute and chronic conditions (angina, otitis, diabetes, heart failure, hypertension and dermatological conditions). An assessment showed that the service model significantly reduced costs while offering the same clinical outcomes as traditional models of care.

The service's success is based on the creation of value through new interprofessional cooperation schemes, secured shared access to information (medical and pharmaceutical records), secured e-prescription and electronic transmission of invoices¹¹.

As such, the costs for pharmacies providing the service are reimbursed by the Regional Health Agency and National Health Insurance. They are as follows: rental of video and measurement equipment and use of tests (\leq 450), ADSL subscription/connection (\leq 150) and 12% FTE technician salary (\leq 310), which makes a total of \leq 910 entirely reimbursed. Pharmacies treating more than 40 patients in a month receive an additional \leq 170 compensation. A reimbursement model such as this could be developed and expanded for other eHealth solutions, reducing costs and achieving positive clinical outcomes¹².

Italy

Platform for Accessing Health Professional Services in Community Pharmacies

In Italy, pharmacists provide the vital link between primary and secondary health services via their "platform"¹³ for accessing health professional services in community pharmacies. The ICT platform allows patients to arrange services with health professionals and health facilities by booking selected services from nurses, physiotherapists and specialist doctors, all with the convenience from within their local pharmacy.

Through this platform, Italian pharmacists are paving the way for future pharmaceutical care services and a future Dossier Pharmaceutique of their own. The creation of the platform as a 'brand' which patients will identify with as the 'go-to' place within their community network, will

¹⁰ <u>http://www.telemedinov.fr/</u>

¹¹ <u>http://www.telemedinov.fr/</u>

¹² http://www.telemedinov.fr/

¹³ <u>https://www.medetel.eu/download/2015/parallel_sessions/presentation/day3/Digitalcare_Farma.pdf</u>



not only act as a point of pharmacy services, but also as a new point of access to wider health services.

To date, over 2.500 Italian community pharmacies are actively participating in programmes for the prevention of cardiovascular diseases. In the second half of 2015, Italian pharmacies completed more than 41.500 electrocardiograms (ECGs/EKGs) and "Holter" monitoring tests ("Holter heart" and "Holter pressure" tests). 12% percent of ECG patients, 41% of the Holter pressure test patients and 37% of Holter heart test patients were referred to their general practitioner for results requiring follow-up. In nice percent of cases, patients were classified as "code red" and were referred directly to acute care settings.

Ireland

ePrescribing

The Irish Pharmacy Union (IPU) is currently preparing Irish pharmacies for ePrescribing and EHR capacity and has recently joined a steering group (Primary Care ePrescribing Steering Group - PCeSG) with other health stakeholders, regulators, business representatives and public authorities to facilitate deployment of the services.

The IPU identifies a number of benefits of ETP and ePrescribing as below:

- 1. Less chance of "transcription" error i.e. dispensing the wrong drug because of misread prescription.
- 2. Information about what was prescribed as well as what was dispensed is captured so trends can be analysed.
- 3. Less information being typed in multiple locations means that everything is more efficient.
- 4. Cuts down the need for people to phone one another, for example, because they can't read handwriting, etc.
- 5. Once the infrastructure is in place other forms of communication are possible, i.e. the network and its uses can be expanded.
- 6. With certain "models" of ETP it is possible to have the prescription in the pharmacy before the patient arrives; therefore, medicines can be prepared in advance.

The Irish national EHR will consist of core operational solutions (with functions such as ePrescribing and case management), along with the ability to aggregate data from these systems into a comprehensive national record, accessible to health and social care professionals, and also to patients, service users and carers. Overleaf is an extract from the IPU's Policy Statement on eHealth 2016 showing the principles for ETP and ePrescribing.



IPU Policy and Principles for ETP and ePrescribing¹⁴

- 1. The system must maintain confidentiality.
- 2. The system must not dis-improve patient safety.
- 3. The system must have in-built redundancy if the central server breaks down.
- 4. The system must be secure.
- 5. The system must be independent of commercial interests.
- 6. The system should be accessible to all pharmacists, prescribers, system vendors and patients.
- 7. System vendors must not be in a position to refuse pharmacists access to the system.
- 8. The system must permit any authorised prescriber to produce a prescription which can be accessed by any authorised pharmacist.
- 9. The system must be 'pull' and not 'push', i.e. the electronic prescription is sent, by the prescriber, to a virtual mailbox which any pharmacist can access ('pull' down) with the authorisation of the patient.
- 10. Prescriptions must only be generated by an authorised prescriber.
- 11. The patient should be allowed to opt in or out of the EHR.
- 12. The pharmacy should still maintain individual patient medication records to assist, for example, in product recalls.
- 13. Pharmacists must have access to all information relevant to the health status of the patient required to properly implement the provisions of S9 of Regulations of Retail Pharmacy Businesses Regulations (S.I.488 of 2008), e.g. disease state, diagnosis, concurrent medication, liver function, kidney function, allergies, etc.
- 14. The system should be linked to the National Medicinal Product Catalogue.
- 15. The system should be developed in a structured way, overseen by an independent body whose agenda is solely patient welfare, e.g. DoH, HIQA.
- 16. Some arm of the State, e.g. Healthlink, should be in charge of the database.
- 17. The HSE PCRS should only have access to the financial information relevant to community drug schemes.
- 18. The system must not be specific to any one vendor but must be based on recognised standards.
- 19. The system should be future-proofed to ensure compatibility with encoding systems.
- 20. The system should prevent duplicate dispensing of the same prescription and alert the pharmacist with a meaningful message.
- 21. The system should be capable of sending alerts to health professionals (including pharmacists) in the case of a product alert/recall.

¹⁴ IPU Policy Statement on eHealth 2016



Netherlands

Medicines Shortages Information System

In the Netherlands a publically accessible online database containing details of medicines in short supply is in operation. The system ("Farmanco") is hosted and governed by KNMP – the Royal Dutch Pharmaceutical Association. The submission system is open to reports from manufacturers, wholesalers, pharmacists, other healthcare professionals and patients. Submissions are usually made by pharmacies and each submission is checked by the respective marketing authorisation holder. The following content is contained in the system: product name; reason for shortage; expected data of availability; and possible solution for patients (substitution, compounding, importing and possible alternatives). The information remains visible in the system for the duration of the shortage plus one additional month.

Portugal

ePrescribing

Portuguese pharmacists have embraced the developments and opportunities that have arisen from ePrescribing. Following successful pilot projects, the national roll-out of ePrescribing ("Receita sem papel")^{15,16} began in 2013 with a pilot deployment in three towns (Ponte de Lima, Setúbal and Figueira da Foz). In 2015 the successful national roll-out was achieved (taking approximately six months). During this transition stage, paper based prescriptions existed side by side with electronic prescriptions. In 2016, full ePrescribing deployment with total paperless prescription was reached.

Benefits for pharmacists include ensuring the authenticity of the prescription, minimising dispensing errors, better methods to identify the healthcare worker (prescriber), better integration with patients' health records and reduced administrative burden permitting more time for pharmacists to focus on patient needs. The integration of a national citizen's smart card to facilitate patient identification proved to have great potential. A number of other efficiencies

¹⁵ <u>https://www.medetel.eu/download/2016/parallel_sessions/presentation/day2/Receita_sem_Papel.pdf</u>
¹⁶

https://www.medetel.eu/download/2016/parallel sessions/presentation/day2/Electronic Prescription Pharmacy ______CV.pdf



have been achieved including streamlining of internal processes for prescription handling (lower cost, lower burden) and efficiencies from eBilling and eRemuneration. The ePrescription system is integrated with the reimbursement system for calculation and claim functions; consequently pharmacists experience a significant decrease in traditional discrepancies with paying entities. Another benefit to ePrescribing is improved compliance with regulatory authority rules as the calculation/validation is done online.



From paper prescription to electronic prescription!

Benefits to patients have been greater safety and control of medicines dispensed, improved patient confidentiality, greater mobility and convenience and a greater (digital) integration with the health service.

Benefits to prescribers include robust and secure identification of prescriber status, significant reduction in chances of identity theft, reduced administrative burden and printing problems, cost reduction and greater information availability for prescribers^{17,18}.

Benefits to regulatory authorities / reimbursement entities include greater capability to control expenses on a daily basis, robust and secure fraud control / detection, streamlining administrative costs and enhanced member control.

¹⁷ <u>https://www.medetel.eu/download/2016/parallel_sessions/presentation/day2/Receita_sem_Papel.pdf</u> ¹⁸



App – Farmácias Portuguesas

The app "Farmácias Portuguesas" expands pharmaceutical services across the country for all patients who are looking for the nearest open pharmacy or indeed a specific one for a number of services. The app can be used to aid the purchase health products or medicines (non-prescription medicines), to find information concerning medicines and to manage one's health. Depending on the availability of the chosen pharmacy, the user can receive non-prescription medicines at home. However, for any prescribed medicine, the patient needs to meet the usual criteria regarding prescription, payment and receipts.

The App also allows the user to find the nearest pharmacy.



The app also offers pharmacy related services and personal management of some health data.

These consist of the following unique functions:

- A Pill Reminder that creates a plan for medication intake for the user (or a family member) which controls the frequency, amount and the time of the next intake;
- "Saúde de A a Z", which allows the user to access useful and accurate information on medicines or wellbeing, separated into multiple categories for easier retrieval, ensuring the information is transmitted correctly to patients and, therefore, contributing to the strengthening of the relationship between the patient and the pharmacy;
- A personal area with a record of the user's biometric and clinical parameters, such as body mass index (BMI), waist measurement, blood pressure, cholesterol, triglyceride and glucose levels, all of these being evaluated in the app and alerting the user for any value out of the standard range that requires further attention.



d

>

>

>

>

>

>

>

1. Pill Reminder

Alerta de Medicamentos Plano de Tomas	< Saúde de A a Z
Nome do Plano de Tomas	🔡 Temas
Medicamentos do Avô	
Medicamento	Todas
+ ADICIONAR MEDICAMENTO	Destaques
Data de Início Hora de Início	Bem Estar
14/07/2016 14:48	Doenças Crónicas
Intervalo entre Tomas	Beleza
Dias Horas 12	
Duração do Tratamento	Família
15 Dias	Espaço Animal
Quantidade	Nutrição e Atividade Física
2	

2. "Saúde de A a Z"

Notas



3. Biometric & clinical parameters control





Spain

Bot PLUS 2.0 and Bot PLUS 2.0 App - Health and Medicines Information Database

Spanish pharmacists (and other healthcare professionals) can access the "Bot PLUS 2.0"^{19,20} both online and via an app in order to obtain information about medicines on the Spanish market. This tool has been available for pharmacists for more than 30 years. It is available online²¹ and as well as software for its installation on a desktop.

Bot PLUS 2.0 is a database with information on medicines, medical devices and health issues developed by the General Pharmaceutical Council of Spain. The programme is divided into two different basic modules: "Bot" (database) and the Module for Pharmaceutical Care Services (please see below).

The "Bot" module is a database complete with information on medicines including the technical description and marketing authorisation status. The programme also features dispensing support messages and pictograms, an interaction checker, a function for medicines with the same composition and one for foreign medicines.

BOT	Configuración	- Estado actualización	Ayuda	Servicios de Atención Farmacéutica
Elementos seleccionados			Comunidad Autónoma de la sesión: MA Base de datos actualizada a 19/10/2	ADRID 2016
(() () () () () () () () () () () () ()		 Buscar Nombre / Código Todos Uso Humano Uso Animal Productos de Para Enfermedades 	Buscer Anzada	2.0 Búsquedas especiales tubre © Lubre © Commental W composición
Interaccones Elimar Vaciar Bennarcar Desmarcar Conso Gouna to Concos Oroanis to Family Topological to Concos Oroanis to Family Topological to Concos Oroanis to Concos Oroanis to Concos Oroanis	Servi	cios de Atención Farmacéutica	ito F	3 (aso) totace marke

¹⁹ <u>https://botplusweb.portalfarma.com/</u>

²⁰ https://www.medetel.eu/download/2016/parallel sessions/presentation/day2/mHealth examples in Spain.pdf

²¹ www.portalfarma.com



The Module for Pharmaceutical Care Services, is a system to record information for dispensing, minor ailments and Medicines Review with Follow-up Service. Additionally, it acts as a support tool for interventions performed by the pharmacist and provides warning messages and information about possible drug related problems.

1 Datos 2 Anteo ersonales	cedentes 3	Parámetros	4 Embarazo y Lactancia	5 Medicamentos	6 Problemas de Salud	7 Incidencia	as 8 Hoja de Evaluación	9 Estado Situación
Presión Ar	terial 🕜			1	+ Indice de M	asa Cor	ooral	
echa/Hora	Sistó.	Diast.	Frec		Fecha/Hora	Peso Al	t. IMC N	ormal
3/08/2013 11:16:23	3 118	69			24/03/2014 17:27:26	65 16	3 24,465	Θ 🗾 🚺
3/08/2013 11:16:35	5 121	69			24/12/2014 11:08:00	62,3 16	2 23,739	Θ 🛛 🚺
3/08/2013 11:18:39	9 118	65						
7/08/2013 11:11:38	3 118	75						
🖡 Análisis C	línicos							
Facha /Ilana	Análisis		Muestra	Valor- Unidades	Dato Cualitativo	Rango Normal	Mensaje Alerta	
recha/Hora			SANGRE			2,5 - 3,5 .		🗾 🚺
24/12/2014 11:15:32 24/12/2014	INR (INTERM NORMALIZE	D RATIO)	COMPLETA					
24/12/2014 11:15:32 24/12/2014 11:08:41 24/03/2014 17:27:41	INR (INTERN NORMALIZE	L HDL	SUERO	58 - mg/dl		35 - 60 mg/dl		
24/12/2014 11:15:32 24/12/2014 11:08:41 24/03/2014 17:27:41	INR (INTERN NORMALIZE COLESTERO	L HDL	SUERO	58 - mg/dl		35 - 60 mg/dl		

The Bot PLUS 2.0 App permits searches without an internet connection on iOS and Android platforms, with monthly content updates. Pharmacists can search by brand name, generic name, national code, disease, ATC classification and marketing authorisation holder.



30t2.0 Ø	•••••• movistar 3G 11:03 * ==>+ < OMEPRAZOL *
Buscar	OMEPRAZOL ARAPRIDE, AUDAZOL, AULCER, BE
	Añadir a interacciones 🛛 🗷 🚿
	Consejos al paciente
≡ ⊘⊷₽	Advertencias
ión Interacciones	Indicaciones
	Posología >
	Contraindicaciones
	Precauciones
De Fananciuncos	Navenación Interaciones Regarder Configuración

When finding a medicine or an active ingredient, the app displays a monograph with indications, dosages, contraindications, cautions, side effects and many more criteria.

The tool also contains filters for patient safety considerations, for example, in renal or hepatic impairment and pregnancy or lactation. "BOT PLUS 2.0 App" also provides requirements for dispensing, pricing and reimbursement and contains a medicines interaction checking function.

••••• movis	tar 3G	11:03	* 🖦
<	OM	IEPRAZOL	8
	Consej	os al pacier	nte
- Se debe a tratamiento	visar al m con warfa	édico si el pacie rina o fenitoína.	ente está en
- Se debe c dias de trata empeoran, como sensa peso injusti	onsultar al amiento, la notificando ación de sa licada.	I médico si al ca os sintomas cor o especialmente aciedad, debilid	nbo de varios ntinúan o e síntomas ad o pérdida de
- Consulte a mejora.	ı su médic	xo si tiene una d	iarrea que no
- Se aconse una segund cena.	ja tomar p a dosis, si	oor las mañanas e tomará una ho	a. Si se requiere ora antes de la
- Tomar las Si el pacien cápsulas o tragarse los en agua. Si macticar los	cápsulas te present os compri gránulos n embargo	enteras, sin ma la problemas pa imidos, puede a o dispersar las o, no se deben p	sticar ni triturar. ra ingerir las brirlas y formas sólidas pulverizar ni
	0-		Ø
Navegación	Interaccio	ones Buncador	Configuración

Marcas y Genéricos Agrup. Homogéneas					
Medicamento	PVP iva	Preci más bajo			
ARAPRIDE 40 MG 28 CAPSULAS GASTRORRESISTENTES	4,15	4,15			
6531402					
ARAPRIDE EFG 20 MG 14 CAPSULAS GASTRORRESISTENTES (BLISTER)	1,26	1,26			
6534137					
ARAPRIDE EFG 20 MG 28 CAPSULAS GASTRORRESISTENTES (BLISTER)	2,42	2,42			
6531488					
ARAPRIDE EFG 20 MG 28 CAPSULAS GASTRORRESISTENTES (FRASCO)	2,42	2,42			
6562833					
AUDAZOL 20 MG 28 CAPSULAS	2,42	2,42			



Medicines or active ingredients searched in the app are automatically added to the interactions checker.



Finally, the app permits full .pdf download of Summaries of Product Characteristics (SPCs).



Medicamento Accesible PLUS App - Health and Medicines Information

Spanish patients benefit from free access to the "Medicamento Accesible PLUS"²² app providing enhanced use of digital patient information leaflets (PILs) on their iOS or Android platform. The app was produced by the joint efforts of the General Pharmaceutical Council of Spain, the ONCE Foundation (Spanish organisation for blind or visually impaired) and a telecommunication industry market leader. The app was designed following principles of design for all and accessibility. The PILs are available in formats for visually impaired users and are compatible with built-in screen readers (VoiceOver-iOS, TalkBack-Android) and alternatively a large print function is available. The app also caters for users with mobility and dexterity difficulties, in that unfolding a cumbersome paper PIL is no longer required to access information.

Patients simply take a photo of the medicine's box (barcode) or search by the medicine's name or code. Sections displayed to the patient include; what this medicine is and what it is used for, what you need to know before you take it, how to take this medicine, possible side effects, how to store this medicine and contents of the pack.



²² <u>https://www.medetel.eu/download/2016/parallel_sessions/presentation/day2/mHealth_examples_in_Spain.pdf</u>



ePrescription in Spain

ePrescription in the Spanish National Health Service has been available, with different paces of implementation – depending on the autonomous community, since the 90's. Currently, there is an ongoing project to increase the interoperability between the different ePrescription services (regional to national). The result of this project will allow dispensing of a prescription from a community pharmacy in an autonomous region different to the region that issued the prescription.

Implementation of ePrescription in the National Health System is 100% at community pharmacy level and is virtually the same at general practitioner level. The percentage of e-prescriptions issued in Spain is over 85%.

nodofarma



nodofarma is a Hub for Pharmaceutical Digital Services established in June 2016. Its mission is to house and support a set of pharmaceutical professional digital services allowing the current pharmacy model to respond to the general population and to the healthcare system. nodofarma will enable the pharmacy profession to be the main actor in the digital network of healthcare services, particularly those linked to medicines, which will be developed at national and European level.



The development of nodofarma is as follows:

- The design and creation of high-performance, efficient and available infrastructures and communications
- The use of an API Gateway providing developers the creation, publication, maintenance, monitoring and protection of an application programming interface
- High levels of security, confidentiality, availability and integrity of transactions and data (audit track and private cloud)
- The development of web applications (network) for pharmaceutical services with and added value for pharmacies and the pharmaceutical organisations

The incorporation of services to nodofarma is being conducted gradually. In 2016 the following services have been incorporated:

- Systems to record data of research studies of pharmaceutical care services (electronic Case Report Forms): at the time of writing, two systems have been developed, one for Concilia (a study to evaluate the reconciliation of medication between care levels) and one for AdherenciaMED (a study to assess the impact of a professional pharmaceutical service on the improvement of adherence to treatment)
- Bot PLUS: development of web services for the medicines database (Bot PLUS) and its centralisation in the hub. This will simplify the access, use and update of the database
- Pharmaceutical Dossier: pharmacotherapy record of patients (informed consent), shared between community pharmacies participating in the system including data from public and private prescriptions and for non-prescription medicines
- Centralised Pharmaceutical Care Services: centralised record system for the provision of Pharmaceutical Care Services such as dispensing, minor ailments and Medicines Review with Follow-up Service
- Spanish System for the Verification of Medicines: nodofarma will host the data derived from the system of verification of medicines in Spain (SEVEM)
- Centralised information centre on the supply of medicines (CISMED): such centralisation will facilitate the dissemination of CISMED and also, the control of information about medicines shortages and irregular supplies nationwide
- Electronic veterinary prescription: the hub will allow the management of electronic veterinary prescriptions between the stakeholders, from the generation of the veterinary prescription to the dispensing of the veterinary medicinal product in the community pharmacy

nodofarma opens new possibilities for integration and interoperability and offers support for pharmaceutical professional services, integrating them in a secure and flexible way with potential for development in the future.



Sweden

FASS App – Geo-location and Stock Control

Patients in Sweden are able to use a geo-location app ("FASS")^{23,24} to locate their nearest pharmacy with the required product. This app enables accessible, up-to-date and nationwide information on pharmacy stock levels for patients and for pharmacists (and other healthcare professionals) through a trusted and established channel.



Information provided includes pharmacy address, "geo-position", contact details, and convenient details of stock levels. These include in stock, few in stock, not in stock, substitution available, not in stock (cannot be ordered from distributor), contact pharmacy (temporary problems in supply). For safety purposes, some medications are excluded, for example narcotics and controlled drugs.

²³ www.fass.se

²⁴ <u>https://www.medetel.eu/download/2015/parallel_sessions/presentation/day3/An%20IT-solution.pdf</u>



Switzerland

netCare Service

In Switzerland, primary care physicians and community pharmacists collaborate to provide care through the pharmacy in the "netCare" service²⁵. This collaboration is a potential solution to the burden of high costs of patients seeking treatment in acute parts of the health service.

In this service, the pharmacy is used as the point of access to the healthcare system. Initial triage takes place in the pharmacy by the pharmacist utilising a decision tree. Three actions are then possible: either treatment by the pharmacist (advice, dispensing of over-the-counter medicines); a video consultation in the pharmacy with a physician (and if appropriate, a prescription is sent to the pharmacy); or referral to a physician for a traditional consultation or to acute care.

The algorithms in the decision tree are validated by physicians and a follow-up call is made to patients three days after the treatment to evaluate the service. It is necessary to have a secured line for the consultation with the physician and requires collaboration with ICT partners.

Pharmacists in the netCare project follow a specific training course (three half-days) to use the decision trees before providing the service. They are also required to participate in 'quality circles' to update their knowledge in all medical conditions commonly seen at a general practitioner's practice (thirteen half-day courses within two years). The scientific group of pharmaSuisse, (the Swiss association of pharmacists) leads the training courses and prepares the course materials.

²⁵ https://www.medetel.eu/download/2015/parallel_sessions/presentation/day3/NetCare_telemed_eng_2.pdf



<text><image>

A study was undertaken in order to evaluate the efficiency, safety, and efficacy according to the law on health insurance in Switzerland. Initial results from the study show that 73% of cases were dealt with by the pharmacist, 20% by the teleconsultations with physicians and 7% were referred to acute care or for a face to face consultation with a physician²⁶.

Benefits for pharmacists include augmentation and improvement of practice, increased professional satisfaction and strengthening of the pharmacist's position in primary care.

Benefits for patients include increased coverage of healthcare, (especially for patients without a physician or whose physician is on vacation), reduction in health inequalities (increased care for foreigners, patients without family physicians), flexible and extended coverage of healthcare (after hours service) and efficient treatment (rapid triage and resolution). Patients also valued accessing a variety of services in one location²⁴.

²⁶ https://www.medetel.eu/download/2015/parallel_sessions/presentation/day3/NetCare_telemed_eng_2.pdf



UK

Summary Care Records

In the UK, pharmacists have recently gained read-only access to electronic health records. The "summary care record" (SCR) is an electronic summary of key clinical information (including medicines, allergies and adverse reactions) about a patient, sourced from the general practitioner's record. It is used by authorised healthcare professionals, with the patient's consent, to support their care and treatment. Pharmacy access to the SCR is seen as a first step to read-and-write access to the full electronic health record.

A proof of concept report²⁷ (140 pharmacies, with 1,900 patient records accessed) showed that in 92% of encounters where the SCR was accessed, the pharmacist avoided the need to signpost the patient to other health service care settings. In 18% of encounters where the SCR was accessed, the risk of a prescribing error was avoided. 92% of pharmacists agree or strongly agree that using the SCR has improved the service they provide to patients. Explicit patient consent is required and there is strict control of access to records. Pharmacies must appoint a 'Privacy Officer' to manage the governance elements of SCR use.

New Medicine Service

In the UK the "New Medicine Service" (NMS)²⁸ provides support for patients who have been newly prescribed a medicine for a long term condition to improve adherence. This service, provided by pharmacists, is initially focused on specific conditions, such as those receiving medication for cardiovascular diseases, diabetes, hypertension, asthma and anticoagulation / antiplatelet. Patients are recruited at the point of dispensing, counselled on any relevant points about the medication and provide consent for the service. Within two weeks either an in-pharmacy or telephone consultation takes place where the pharmacist conducts a semi-structured interview to identify any problems, side-effects, concerns or non-adherence to the new medication. At this point referral can be made to the patient's doctor if required or appropriate advice is provided by the pharmacist and a date arranged for a final consultation within a two week period. These interactions are also an opportunity for the pharmacist to provide dietary and healthy lifestyle advice to the patient. The NMS has been proven cost effective and to improve adherence by 10%, and in 2014/15 almost three-quarters of a million New Medicine Services were delivered to patients by pharmacists²⁹.

END

²⁷ <u>http://systems.hscic.gov.uk/scr/library/poc_report.pdf</u>

²⁸ <u>http://psnc.org.uk/services-commissioning/advanced-services/nms/</u>

²⁹ http://psnc.org.uk/funding-and-statistics/nhs-statistics/nms-statistics/